

ABSTRACT OF THE DISCLOSURE

A technique for component-based processing. A system for implementing the technique comprises a component specification element, a control flow specification element, a data flow specification element, a resource specification element, a quality of service specification derivation element, and a runtime engine. The quality of service derivation element outputs an application model in combination with a quality of service specification derived by implication from relations between components, control flows, data flows and resources. The runtime engine deploys the quality of service specification as a runtime contract in a runtime processing environment. Examples of such qualities of service include requirements of a process to have support provided for transactionality, recoverability, asynchronous messaging and the like.